



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/601,384 | 07/27/2000 | Lester F. Ludwig | COLB-002/01US | 2926 |

23373 7590 06/06/2006
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER
SELLERS, DANIEL R

ART UNIT 2615
PAPER NUMBER

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | |
|--------------------------------------|--|--|
| Application No. 09/601,384 | Applicant(s) LUDWIG, LESTER F. | |
| Examiner Daniel R. Sellers | Art Unit 2615 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 May 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 2-10 and 50-60 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 2-10 and 50-60 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 July 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
- Certified copies of the priority documents have been received.
 - Certified copies of the priority documents have been received in Application No. _____.
 - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. Applicant's arguments filed May 1, 2006 with respect to claims 2-4, 6-10, and 54-60 have been fully considered but they are not persuasive.
3. Applicant's arguments, see page 11, paragraph 4 and 5, filed May 1, 2005, with respect to claim 5 have been fully considered and are persuasive. The rejection of claims 5 and 50-53 has been withdrawn.
4. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., specifics of synthetic aperture microphone technology) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The independent claims, claims 2 and 4, recite "synthetic aperture microphone *processing capabilities*" (emphasis added). The processing capabilities that are claimed are synthetic aperture microphone processing capabilities, but synthetic aperture processing is not claimed. A capability does not define the means of performing, and the claims do not recite specific means for performing these processing capabilities. Furthermore, the independent claims do not state that the processing capabilities are used. They are only present in the device. The apparatus, taught in the prior art by

Minami, teaches processing capabilities that have synthetic aperture microphone processing capabilities (e.g. adaptive processing capabilities). Marash, non-cited prior art, teaches that adaptive processing is used in synthetic aperture microphone processing (Col. 6, lines 15-21 and Col. 8, lines 24-64), so this teaches that adaptive processing, as taught by Minami, has synthetic aperture processing capabilities.

5. The dependent claims 3, 6-10, and 54-60 also do not define how this particular processing capability is used.

6. A typographical error was introduced in the last office action and has been corrected. The rejection under 35 USC 102 is maintained for claims 2-4, 6-10, and 54-60.

7. A new rejection of claims 5 and 50-53 under 35 USC 103 is presented in the following.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claims 2-4, 6-10, and 54-60** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Minami et al., U.S. Patent No. 5,555,310 (hereinafter Minami).

10. Regarding **claim 2**, Minami teaches a device with at least one microphone configured to perform adaptive stereo echo-canceling operations (Col. 3, lines 58-64, Col. 6, lines 56-63, and Fig. 3, units 101R and 101L). Minami also teaches that the device has synthetic aperture microphone processing capabilities, such as adjusting

Art Unit: 2615

transfer functions between a plurality of microphones and speakers (Col. 4, line 66 – Col. 5, line 52).

11. Regarding **claim 3**, the further limitation of claim 2, see Minami

... wherein

the adaptive acoustic stereo echo-canceling and synthetic microphone processing capabilities are combined in a single packaging. (Fig. 9, units 510₁-510₄, 600, and 720)

It is inherent that the apparatus, taught by Minami, is combined in a single packaging.

12. Regarding **claim 4**, see the preceding argument with respect to claim 2.

A device for use in association with a multimedia system capable of reproducing at least audio signals at a multimedia workstation, the device

A) being associated with a plurality of microphones, and

B) including synthetic aperture microphone processing capabilities.

Minami teaches a multimedia system with these features using a plurality of microphones.

13. Regarding **claim 6**, the further limitation of claim 2, Minami teaches a teleconferencing system, wherein it is inherent that the video and audio devices are in one housing (see Col. 1, lines 22-29 and Fig. 10).

14. Regarding **claim 7**, the further limitation of claim 6, Minami teaches a stereo echo canceling system for use in a teleconference system, which has reception and transmission capabilities (Fig. 3, unit 300). It is inherent that a video decoder is used in the display system that Minami teaches (Col. 15, lines 8-11 and Col. 25, lines 40-42).

Minami teaches an audio coder and decoder (Fig. 3, units 201 and 401).

15. Regarding **claim 8**, the further limitation of claim 6, Minami discusses transmission capabilities including analog and digital capabilities (Col. 1, lines 29-45).

Art Unit: 2615

16. Regarding **claim 9**, the further limitation of claim 8, Minami teaches analog reception through microphones and digital reception through a transmission channel (unit 300).
17. Regarding **claim 10**, the further limitation of claim 9, see the preceding argument with respect to claim 8. Minami inherently teaches at least a primary digital stream for transmitting the video signal in a teleconference system.
18. Regarding **claim 54**, the further limitation of claim 7, see the preceding argument with respect to claim 8. Minami teaches these features.
19. Regarding **claim 55**, the further limitation of claim 54, see the preceding argument with respect to claim 9. Minami teaches these features.
20. Regarding **claim 56**, the further limitation of claim 55, see the preceding argument with respect to claim 10. Minami teaches these features.
21. Regarding **claim 57**, the further limitation of claim 2, see the preceding argument with respect to claims 6 and 8. Minami teaches a system that can couple to at least one of analog and digital audio and video networks.
22. Regarding **claim 58**, the further limitation of claim 7, see the preceding argument with respect to claim 57. Minami teaches these features.
23. Regarding **claim 59**, the further limitation of claim 58, see the preceding argument with respect to claim 9. Minami teaches these features.
24. Regarding **claim 60**, the further limitation of claim 59, see the preceding argument with respect to claim 10. Minami teaches these features.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. **Claims 5 and 50-53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami as applied to claims 2-4 above, and further in view of Marash (previously cited as non-cited pertinent prior art).

27. Regarding **claim 5**, the further limitation of claim 2, see Marash

... wherein

the synthetic aperture microphone processing capabilities include the capability to adjust a position of a spatial region corresponding to the area of maximum sensitivity of the synthetic aperture microphone function. (Col. 6, lines 15-21 and Col. 8, lines 24-64)

Minami teaches a system with the features of the parent claim, but does not teach that the processing capabilities include the capability to adjust the sensitivity of a microphone array corresponding to a particular region in space. Marash teaches that the sensitivity can be adjusted, as shown above. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Minami and Marash for the purpose of suppressing unwanted interference (Marash, Col. 3, lines 32-34).

28. Regarding **claim 50**, the further limitation of claim 3, see the preceding argument with respect to claim 5. The combination teaches an adjustment of the sensitivity of microphones with respect to a spatial region.

Art Unit: 2615

29. Regarding **claim 51**, the further limitation of claim 4, see the preceding argument with respect to claim 5. The combination teaches this feature.

30. Regarding **claim 52**, the further limitation of claim 5, see the preceding argument with respect to claim 6. The combination teaches this feature.

31. Regarding **claim 53**, the further limitation of claim 52, see the preceding argument with respect to claim 7. The combination teaches these features.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chu et al., U.S. Patent No. 5,664,021 and Benesty et al., U.S. Patent No. 5,828,756.

33. The applicant is reminded that Technology Center 2600 has undergone restructuring as of March 19, 2006. Any **further communication** regarding this application should **indicate the new Art Unit 2615** (old art unit 2644).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRS



SINH TRAN
SUPERVISORY PATENT EXAMINER